

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2005/002328

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7	C07K14/51	C07K14/47	C12N15/12	C12N15/63	C12N5/10
C12P21/00	C07K16/22	A61K38/18			

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K C12N C12P A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, EMBASE, CHEM ABS Data, Sequence Search

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category <sup>a</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE NCBI from human 7 November 2003 (2003-11-07), "Chain A, structure of the Bone Morphogenetic Protein 2 Mutant L51P" XP002297411 Database accession no. 1REUA abstract</p> <p>-----</p> <p>NICKEL J ET AL: "THE CRYSTAL STRUCTURE OF THE BMP-2: BMPR-IA COMPLEX AND THE GENERATION OF BMP-2 ANTAGONISTS" JOURNAL OF BONE AND JOINT SURGERY, JOURNAL OF BONE AND JOINT SURGERY. BOSTON, US, vol. 83-A, no. SUPPL PART 1, 2001, pages S1-7, XP009005357 ISSN: 0021-9355 page 494, column 1, paragraph 2</p> <p>-----</p> <p style="text-align: center;">-/-</p>	1-4, 14-17
Y		1-6, 14-38

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

Date of the actual completion of the international search

26 April 2005

Date of mailing of the International search report

06/05/2005

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>KIRSCH THOMAS ET AL: "Crystal structure of the BMP-2-BRIA ectodomain complex" NATURE STRUCTURAL BIOLOGY, vol. 7, no. 6, June 2000 (2000-06), pages 492-496, XP002297408 ISSN: 1072-8368 cited in the application page S9, column 2, paragraph 1; figure 2a page S12, column 1, paragraph 1</p> <p>-----</p>	1-6, 14-38
A	<p>KIRSCH T ET AL: "BMP-2 ANTAGONISTS EMERGE FROM ALTERATIONS IN THE LOW-AFFINITY BINDING EPITOPE FOR RECEPTOR BMPR-II" EMBO JOURNAL, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 19, no. 13, 1 July 2000 (2000-07-01), pages 3314-3324, XP001022147 ISSN: 0261-4189</p> <p>-----</p>	
A	<p>BALEMANS WENDY ET AL: "Extracellular regulation of BMP signaling in vertebrates: A cocktail of modulators" DEVELOPMENTAL BIOLOGY, vol. 250, no. 2, 15 October 2002 (2002-10-15), pages 231-250, XP002297409 ISSN: 0012-1606</p> <p>-----</p>	
A	<p>GROPPE JAY ET AL: "Structural basis of BMP signaling inhibition by Noggin, a novel twelve-membered cystine knot protein." THE JOURNAL OF BONE AND JOINT SURGERY. AMERICAN VOLUME. 2003, vol. 85-A Suppl 3, 2003, pages 52-58, XP009036882 ISSN: 0021-9355</p> <p>-----</p>	
T	<p>KELLER SASCHA ET AL: "Molecular recognition of BMP-2 and BMP receptor IA" NATURE STRUCTURAL &amp; MOLECULAR BIOLOGY, vol. 11, no. 5, May 2004 (2004-05), pages 481-488, XP002297410 ISSN: 1545-9993</p> <p>-----</p>	